THE

# SOUTHERN AGRICULTURIST.

DECEMBER, 1836.

## PART I.

### ORIGINAL COMMUNICATIONS.

*On Grasses.*

Columbia, S. C., October 28th, 1836.

*Dear Sir,*—Having been long deeply sensible of the importance of a successful cultivation of the Grasses in our State, I have applied my attention to that subject, with some considerable assiduity and care, for several years past; and am sorry to say, I have not as yet met with that encouragement I had very earnestly hoped for, and had anticipated. Nevertheless, I am not so much discouraged as to deter me from further trials; nor do I, in the least, despair of ultimate and complete success, if the experiments should be persevered in, with an assiduity and a sound discriminating judgment, commensurate, in any moderate degree, with the vast importance of the object. Every planter and farmer is fully sensible of the prodigious disadvantages under which he labours, from the want of rich and abundant pasturage and forage grasses. He cultivates richly remunerating staple productions, and receives very handsome annual incomes of money; but, from the sterile face of the country, as regards the grasses and forage, he finds his income unavoidably and deeply encroached upon and drained, by the annual purchase of mules, horses, pork, and beef. In fact, he finds his seemingly lucrative employment rather a tantalizing fiction than a substantial reality. Indeed, it has been asserted, by some of the profoundest writers on agriculture, and I am inclinad to believe with much truth, "That no country was ever known to be

really and permanently flourishing, that was destitute of rich and succulent grasses."

That South-Carolina is incapable of producing a rich supply of the grasses, it would be absurd to suppose. I remember the time myself, when almost the whole surface of her soil, especially in the upper country, was a rich natural meadow, of the most succulent and nutritious herbage and grasses: and a soil so fertile as her's is, in the production of other valuable articles, it would be preposterous to conclude, is sterile in the grasses. The truth is, we forget that every climate and soil has its own peculiar adaptations to certain vegetable productions; and not less so to certain species of grasses than to any thing else. That our climate is too hot and arid for the grasses, is a mere chimerical assumption. We know that the richest pasture lands in the world are found between the Tropics; and the species of grasses which luxuriate there, would at once dwindle and fail in a high northern latitude, as certainly as the northern kind do at the south. Our error, heretofore, has manifestly lain in seeking our grass seeds in climates entirely too cold. We have persisted in endeavouring to force the culture of the northern grasses in our southern climate, instead of seeking them amongst the indigenous and succulent kinds in our own soil, and elsewhere still further south. It would be absurd to attempt to force the culture of clover and blue grass in the Island of Jamaica; but the Guinea-grass, first introduced by accident from Africa, luxuriates there in a most extraordinary manner, and has proved to be a mine of wealth to that people. In like manner, we have no reason to despair, that with a proper spirit of enterprise and perseverance, we may yet succeed in finding some species of the grasses, that may flourish and revel in Carolina, equal to the clover and Timothy of the northern states, or the Guinea-grass of Jamaica.

And although it is to be feared that many species of the native grasses best adapted to our soil, have become extinct by our negligence, yet perhaps it is not the case with all of them. And, by diligent observation, perchance, a solitary vigorous and succulent tussock may be found in some unfrequented nook, or perhaps in more exposed situations, which, upon trial, may prove equal to our most sanguine wishes. Witness, the Gama-grass, which is a native in almost every part of the State, and which

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gives a more flattering promise than any other that has ever been tried; yet this grass had never commanded the slightest attention until very recently. There may be other kinds, still superior to this, which we are treading under foot every day without notice; and which, if brought in cultivation, might cause our land to teem with animal life, and diffuse an aggregate of prosperity, wealth, and human enjoyment, of which, at present, we hardly have a conception. But if there are none such here, let us not despair: let every one exert himself to introduce seeds from elsewhere. The innumerable species of grass and forage plants growing upon our luxuriant prairies of the south and west, are all, as yet, untried. And South America, for aught we know, may be producing grasses, that, if introduced here, might clothe our fields spontaneously with an inexhaustible abundance of the richest pasturage and forage. But to accomplish this desirable object requires the united exertions of every citizen. There must be a widely diffused anxiety for effecting the object, and a pervading spirit of emulation every where, before we ought to look for success in the pursuit. A single individual, it is true, might perchance hit at once upon the very grass best adapted to our climate and soil, but it would be more an accident than any thing else; but if thousands were engaged in similar experiments at the same time, they could hardly long fail of success. In hopes, therefore, of giving some stimulus to the laudable undertaking, I have been induced to offer you this brief communication; and although I have not much else than an account of failures to present to you, yet I conceive even these are not without their utility. They may serve to prevent others from repeating the same experiments, and thereby save them from disappointments and loss of time, whilst they may at once direct their attention, and make their attempts, in some other untried direction. Let no one be deterred from the undertaking, from a fear of the expense, or a loss of labour that it may require. One peck of seed is sufficiently ample for the experiment, and the labour bestowed in sowing a peck of seed is, comparatively, nothing. Experiments upon the small scale are every way to be recommended; they cost but little, and are quite sufficient for shewing the result of the inquiry in hand. A careful observer may perceive, almost at a glance, after his plant gets into growth, whether it is con-

genially located, or not. If its adaptations are complete, it will, at once, throw out unequivocal evidence of the fact. It will, for the most part, exhibit vigorous habits, and will not droop or fade for slight and trifling causes. On the contrary, a plant uncongenially located, will early exhibit a delicate appearance, and will languish and droop from causes slightly adverse to it: and a peck of seed, with due attention, is quite as sufficient for ascertaining the adaptation of the plant to its soil, as many bushels would be.

I have made two trials to cultivate the red clover. One of them was made in 1816, on rich river-land in Richland district. It was sowed in February, without oats, and, at the same time, was applied, one bushel of gypsum to the acre. It came up well, and flourished until the oats were cut off; but there came a drought in July and August, in which, it nearly all perished. I again tried it in 1832, with orchard grass, on fresh and somewhat clayey and fertile highland, in Fairfield district; and, although I applied manure somewhat liberally, and a bushel of gypsum to the acre, it did not flourish so as to make it an object to cultivate it, either for forage or as a grand manure. Clover, I think, requires carbonate of lime, as well as gypsum, in the soil. In February 1832, I sowed down four acres of orchard grass seed *(Dactylis Glomerati)* on high fresh land. This soil was somewhat clayey, and, naturally fertile, with a good deal of small hornblende and fellspar stones in it. I had left the lofty oak standing upon it, about one hundred or a hundred and fifty feet apart; two bushels of my fine clean seed were put upon an acre with some red clover seed and oats, it came up very finely, and flourished until June, when we had a drought with great heat; the grass began to turn yellow in patches on the poor spots, when gypsum was applied at the rate of one bushel to the acre, this caused an immediate change in the grass, it became green and went on growing finally; in August it made an effort to seed but they became blasted and faded; during seeding time the grass faded and declined, but in September it began to spring again, and grew until January, when it stopped growing, but, continued green underneath all winter. Early in March 1823, it began to grow again, and flourished in an encouraging manner; in the winter, it received a pretty liberal supply of cotton-seed

manure, and, in June, it got a bushel of gypsum to the acre; it would have afforded rich pasturage during this spring, but, being anxious to make seed, it was reserved for that purpose, in July and August, it made again another effort to seed, but the heads all blasted, the grass again partially died down; but in September it sprung up and held on the same course as of the year before.

Early in March 1834, it was ready for pasturing and fifteen mules were pastured on it every night, and every Sunday, until the latter part of July; it bore the pasturing admirably well, and was of the most substantial benefit to the mules, who would recruit on it in a short time. The mules, were again pastured on it in the autmun. Early in March, 1835, it was again ready for the mules; it had received another coat of cotton-seed manure in the winter, and grew vigorously; it was of equal service to animals this year, as it was during the last; but in August and September, it manifested a disposition to die out and to become thin on the ground. In the spring of 1836 (this year), it had so died out as to furnish no valuable pasturage, so that I consider it has run its course, and is a failure. For it must be kept in mind, that a grass which requires cultivation with a plough or hoe, or a grass that requires very frequent sowing which will not make seed, and where seed is costly, as this seed is, cannot be cultivated to profit with us. It is worth remarking, that this grass, in very rich spots, grew most luxuriantly, to the length of eight and ten feet; and that it grew every whit as well under the shade of the oaks, up to close around the foot of the trunks, as any where else.

In February, 1834, I sowed, broad-cast, a lot of high land, inclined to be sandy, with the tall meadow oat grass seed, *(Avena Elatior.)* The lot was highly manured, and the grass came up and looked green and vigorous; but when the heats of summer came upon it, it began to die out, and by the month of September there was scarcely a plant of it to be found.

In February of the same year, (1834,) I sowed a lot of Herd's-grass, or red top *(Argostis vulgaris)*, on rich river bottom land, inclining to be stiff, and dry enough for the culture of corn; the grass came up well, and continued green all the year, but never rose six inches above the ground, and in the second year had nearly disappeared.

In February of the same year, (1834,) I sowed a lot down with furze grass, on the same kind of river bottom as the last. It came up well, and continued green all the year, but never grew more than six or eight inches high; and in the second year had nearly disappeared.

In February of the same year, (1834,) I sowed down a lot with the seed of green seward, *(Poa viridi,)* on the same kind of river bottom as the two last. It came up well and flourished. It keeps green all the year, and what is important, it keeps its verdure and continues to grow apparently as well in the winter as in the warm season. It is naturally a short grass, and with me it is not more than two or three inches in length: it grows very thick on the ground, and is a fine soft grass. It promises to occupy the ground in a very durable manner, as it now has as firm a hold of the lot as it had the first year. And although it would not warrant the employment of valuable planting lands in this grass, yet I cannot but think if the waste stiff bottom lands on our rivers were put down in it, it would be found extremely valuable for sheep pastures. It has every appearance of being most peculiarly adapted to that animal, and particularly for winter pasturage. I have several lots of *Leersia Oryzoides* on rich boggy grounds, which some years will yield spontaneously heavy returns of excellent hay. It is an excellent grass, and grows extremely thick and rank on land, with a season exactly adapted to it; but it requires a very moist soil, which, in a wet year, as the present has been, becomes too wet to make the hay; and if it should be a much dryer soil, it will fail entirely in a dry season. This uncertainty, of course, detracts from its value; nevertheless, it is still a valuable grass, and those who have soils adapted to it would do well to cultivate it.

I have reserved an account of the Gama-grass for the last, although in the order of time it was one of my early experiments. I have done so, because it has flattered me with a much better prospect of success than any other grass, and therefore I have more to say on the subject. In the summer of 1832 I collected with difficulty, as much Gama-grass seed as would plant a small lot. It was planted in December, (in drills eighteen inches apart,) of that year, on a sandy lot, pretty highly manured. It

came up in the April following, and grew off flourishingly, which it has continued to do ever since. Being desirous of increasing my seed, I have reserved it to the present time for that purpose, and have neither fed it down nor cut it, except some small parcels, which I cut to ascertain how it would be eaten by the horses and mules, both by way of soiling and in the form of hay; which experiments have been fully satisfactory,—as I have stood by, and have seen the horses, with sweet corn blades and Gama-grass hay before them, eat of each, without discrimination or preference for either—partaking first of one, and then of the other. They eat it greedily also in the withered state, by way of what is termed soiling. The grass on this plot grows with prodigious luxuriousness, the blades getting the length of ten and twelve feet, and forming a sward on the ground, as it bends down and settles, of the depth of eighteen or wenty-four inches. I have been sedulously engaged in collecting seeds from this lot, and from other sources, for which I have paid twenty-five cents a quart, or ten dollars per bushel, until I have now a lot of three or four acres on rich alluvial bottom lands. The grass here is luxurious and fine, and next year I expect to reap a most abundant harvest from it. It has been apprehended by some, that this grass is too coarse to be eaten by horses and mules; but I am fully persuaded, indeed convinced, that this is a groundless apprehension. My own limited trials, and authenticated trials from various quarters, all concur to shew, that these animals not only eat it, but they eat it with avidity. It is true it may be left to stand without cutting, until it gets too old and tough; but there is no necessity for this. Its growth is so rapid that it may be cut every month, and even at shorter intervals from April until frost, of a length of from twelve to twenty-four inches. When in this young state, it is as succulent, tender and nutricious, as any grass I ever saw.

The only objection I know of to this grass, or rather the only difficulty attending its culture, (for, in fact, I know of no objection to it,) is the difficulty and tardiness of propagating it. It yields seed in abundance, but still they are scarce, and what is likely to keep them so, is the singular manner in which the seeds mature: they form in a spike at the top of a tall seed stalk, and mature only one seed at a time. Its maturity is readily known by its

dark chocolate colour, but if not gathered at once, it is apt to be lost. The seed seldom adhere to the spike after maturity longer than thirty-six or forty-eight hours, and when it falls, it is concealed in so dense a sward that it is utterly useless to look after it. Of course the collection of the seeds is a most tedious process, requiring the daily attendance of hands for several weeks; and although the mature seeds vegetate with sufficient certainty, if planted in November or December, yet from the carelessness of the collectors, and especially when collected for sale, many unripe seeds are sure to be gathered, which renders their vegetation very precarious. This circumstance will, doubtless, retard its extension and rapid propagation, but, I feel confident, it will inevitably work its way, and ultimately be found on every plantation, and then will be esteemed as second only to the richest staple production in the State. Besides its abundant yield and its nutritious qualities, it has some certain habitudes peculiar to itself alone, which recommend its culture. In the first place, such is its special adaptations to our climate and soil, it revels with luxuriance on sandy pine lands, on stiff lands, and light lands, on the rich alluvial soil of the river bottoms, and on the highest and dryest soils, and on the moist lands of the water courses. I have never seen it growing on boggy lands, but I have seen it on the sides of creeks where it was subject to be overflowed by every freshet, and there it grows so rank and vigorous, as to show that it delights in those inundations. Again, it is not only perennial, but it forms larger and stronger roots every year, and grows ranker and stronger, and the period at which it may die out is entirely unknown. But, forming a conjecture from such circumstances as are known, it is, doubtless, a plant of many years duration. Indeed, so strong a possession does it take of the land, that after five years growth it will be impracticable to reclaim the land from it, but by the mattock and grubbing hoe. No plough in this country can do any thing with it. These are rare habits of the plant, and will strike every one as rendering it invaluable; for no grass will be found profitable which requires much pains to cultivate it, and keep it set upon the lands. And moreover, if the seeds could once be had cheaply and abundantly, it could not fail to prove one of the most powerful restorers and fertilizers of our exhaust-

ed fields and hill-sides, that has ever been tried. When once well set all washing of the land would be at an end; and if suffered to grow uncut and unfed for four or five years to shade the land in summer, and to spread its own substance on the land to rot in winter, it could not fail to make the poorest exhausted old field extremely rich. It would require labour to grub up the roots and reclaim the land, but when done the roots alone would give a rich supply of manure.

I have given you these facts from the record, as I have kept a book, in which I have carefully written the dates, circumstances, and results of every experiment I have made. Although apparently unimportant, the communication of them may nevertheless, perchance, be productive of some good; and, if I should live, I may, at a future time, trouble you with some further communications.

JAMES DAVIS, M. D.

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## *On the Management of Negroes, &c.*

[Concluded from page 584.]

Having laid down some rules for preserving cleanliness among negroes, and attending to their diet, I proceed next, to the regulation of their morals and habits.

As soon as the negro is convinced, that cleanliness adds to his comfort and ease, at home, he will unconsciously practise the same, in discharging all his master's work. The slave, who has his head combed, and his face washed, and his clothes cleaned, will seldom be found neglecting his work in the field, or scratching his head, as is too often the case, when he should be at his task. Niceness and exactness in discharging his duties, will imperceptibly creep into all his habits.

### *Order.*

To observe order in all things, is a precept of Solomon; and the planter who will cause his negroes to adhere to this wise admonition, will live an easy and agreeable life throughout the year. I have seen a certain planter, who always has his negroes at work: they are never idle; and yet, he is always behind the seasons. Now, this arises from the non-observance of order. If he would only cause his negroes to do every thing as the time, the

place, and the circumstance demanded, every thing would be done right, and he would get along well. Preserve order yourself, in all your actions, and your negroes will imitate you. For instance, if you ride by a fence that has been broken down, and you have a boy with you, make him stop and repair it; if you have no boy, get down, and do it yourself. Let every negro about you, and on your plantation, be made to observe this. I make it an offence, severely punishable, for any of my slaves to pass by any thing out of repair, without either stopping to put it to rights, or informing the proper person whose business it is to do so. One rail supplied, when the fence demands it, will save a supply of perhaps twenty or thirty, a week afterwards. I have seen negroes pass over bridges which had great holes in them, fifty times, and never take the trouble to mend them, when one log of wood could easily have done so. If negroes of mine did the like, be they male or female, if they were old enough to have discretion, I would punish them for the negligence. Let it not be said that such exactness is severe. Practice makes such things easy to the slaves, and they find it much better for their own comfort in the long run. The master should make it his business to shew his slaves, that the advancement of his individual interest, is at the same time an advancement of theirs. Once they feel this, it will require but little compulsion to make them act as becomes them.

*Morals.*

The planter should endeavour, as much as possible, to make his negroes adhere to moral rules. I know that to lay down any general code for them is idle. But then, a few particular rules may be strictly attended to. Among these, I particularly enjoin upon my slaves, the observance of their marriage contracts. In no instance do I suffer any of them to violate these ties; except where I would consider myself justified in doing so. Independently of the excellence of such an institution itself, it has the additional advantage of keeping your negroes at home.

If there be a Church in the vicinity of the planter's residence, he should oblige all of his negroes to attend it, at least once a day. This has an excellent effect. Most negroes take Sunday as their day of visiting; and it not unfrequently happens, that they do more mischief on that day, by colleagueing among themselves, than on any other.

Now, the attendance upon Church, permits them to meet their relatives and friends there, and, at the same time, keeps them out of all mischief. It is rarely that any one can attend a house of religious worship without gaining some wholesome information. And the slave will generally learn, at such places, the reasons which sanction the master to exact of him his respective duties.

Upon their return from Church, I generally employ them in regaling themselves in different healthful and innocent amusements,—such as will tend to keep them in good spirits with each other. I know that some persons will object to this, as a desecration of the Sabbath; but, for my own part, I cannot be persuaded that God's holy laws are violated in the innocent recreations of his creatures. But no more of this at present.

I have now, Mr. Editor, concluded my notions upon the management of Negroes. I feel that I have said far less than the importance of the subject demands: but I hope that the little I have said, and the very imperfect manner in which it has been said, may induce others to give their notions likewise. We live by example, and, let me add, that much which is borrowed in this way, is immensely valuable. That every planter may recollect this, and that we may all do more than we have done, is the earnest wish of

A PLANTER.

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### *Management of Cattle and Milch Cows.*

St. Paul's Parish, Nov. 10, 1835.

*Mr. Editor,*—At your request, I venture to appear before the public as a scribbler: but when I recollect that you assure me, "it is not the manner, but the matter, that you desire," I feel myself somewhat emboldened in doing so.

I can readily appreciate the correctness of your remarks, when you observe, that "the attention to stock, and the dairy, constitute one of the chief sources of the planter's comfort and income." This, sir, ought to be the case. Our planters ought to feel, that to supply themselves with their own butter, and their own beef, is not only adding to their own interest, but to that of the State also. If they did so, we would not now have to give 18 or 20 cents for our meat. Our markets would be

better supplied, and at a better rate. But to your request. You ask me to give you for publication, the result of my experiments, in the raising of stock, and in making butter.

In answering your question, I would premise, that my stock cattle, and my cattle for milking, are kept seperate and distinct.

*Stock Cattle.*

These I suffer to run at large during the day. My range for them is a large savannah, or old rice-field, where they are kept, with one or two boys or men minding them. At night they are driven home and penned, both winter and summer: the calves in one pen, the mothers in another. I separate the calves thus, because it keeps them from being hurt; and, by suffering the cow's milk to accumulate during the night, makes them more fat, by taking it from her in that state, in the morning. In the winter season, I feed them at night with straw or corn-shucks, saved for the purpose. I always keep my cow-pens well littered, and in no instance do I permit the pens to become boggy and damp, for want of leaves or straw. By employing a part of your force once or twice a month, in collecting litter for your pen, you will gather, from even a small number of cows, manure enough for all your fields. But every planter knows this. It is of the management of milch cows, that I would offer a few hints.

*Milch Cows.*

A few cows well fed, will afford more milk than six times the number indifferently fed. This is not a mere assertion: it is a fact I have experienced. A few years ago, out of thirty cows which I milked, I could not, absolutely, procure butter enough for family use. Some of them gave two quarts of milk, but by far the greater number gave not half so much. At that time, I did not feed my cows, but merely suffered them to pick up what they could from the fields. For the last four years I have followed a different course, and one which has perfectly assured me of the truth of my position, viz., that a few cows well fed, will give more milk than six times their number suffered to feed themselves. My mode of managing my milch cows is, to have a separate pen made for them, in a warm place, with a good cover over the pen. I have

eight cows kept for milking. These are kept in separate stalls, and are fed twice per day.

I always have a patch of turnips, or ruta baga, for feeding them, and I steam their food, in a large pot, kept for the purpose. All of the potatoes,—scraps, and other vegetable matter on the plantation, may be cooked for them. Cows thus fed, will yield milk throughout the entire year; will always keep fat; will have good calves; and make more manure, if their pens be well littered, than a dozen cows that are not kept like them. In a week after such cows calve, their calves should be separated from them, and fed, and only permitted to be with their mothers when milked.

I am astonished, Mr. Editor, that a greater number of our people do not turn their attention to the raising of stock, particularly in our parish. We have immense rice fields and "cane breaks," which are now receiving no sort of cultivation, and, I am sure, upon these as fine cattle might be raised, as in any part of Kentucky. In another number, I may write you more at length upon this subject; until then, I remain, your obt. servant,

J. W. W.

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## *The Mangle Wurtzel.*

St. Andrew's Parish, Nov. 5th, 1836.

*Mr. Editor*,—Permit me to recommend to the especial attention of Planters, as a food for their stock, the cultivation of the Mangle Wurtzel. It is not too late to plant the seed, which will produce a good return by the spring.

The best mode of planting them is probably the following. In a piece of land, which has been well cow-pened, make four drills, about three feet apart. Plant your seed upon these drills; dropping them at a distance of about six inches. As the plants require it, you must haul up earth to them. As I have already stated, you will have these vegetables early in the spring.

The advantages of the Mangle Wurtzel are numerous. They produce in great abundance; grow very large, and their tops will admit of being cut for food for your cattle three times during the season. The food for cows should be boiled; because preparation of it in this way, adds twofold to its value.

A Lover of good Milk.

## *Legal Knowledge for the Planter.—Executors and Administrators.*

The office of a personal representative is one of such common occurrence in the ordinary course of human affairs, that a familiar description of the rights and duties of Executors and Administrators, may be of some service to almost every person engaged in the business of life.

An Executor, is one to whom a Testator has confided the execution of his last will and testament. An Administrator, is one appointed by the Ordinary, to administer the estate of a person who died without a will, or an executor; or whose executors have refused, or ceased to act. The former, must look to the will for his powers; the latter, derives his authority from the appointment of the Ordinary, and the provisions of the law.

By the law, as it now stands here, no person can act as an executor, or be appointed administrator, until he has attained the full age of twenty-one years. In case an infant be named executor, or the right of administration devolves upon a minor, the Ordinary must grant administration to another during the minority of the infant, i. e., until he arrive at the age of twenty-one years.

The first duty of the executor should be, to prove the will. The common mode of probate, that is, when the will is not contested, is, for the Executor to take the will before the Ordinary, and there depose, on oath, that the writing contains, to the best of his knowledge and belief, the last will and testament of the testator, and that he will truly perform the same, by administering the effects according to the order prescribed by law, and that he will make a full and perfect inventory, of all the chattels, rights and credits of the testator, and exhibit the same, into the office of the Ordinary, for registry. If the validity of the will be disputed, he will be required to establish it in a more solemn way, by the examination of witnesses, in the presence of the parties interested. He should then produce, to three or more appraisers, appointed by the Ordinary, all the goods and chattels of the testator, that shall come to his possession or knowledge, and cause to be made, a true and just appraisement, on oath, of all and singular the said goods and chattels, and exhibit the said

appraisement, certified under the hands of any three or more of the said appraisers, into the office of the Ordinary, together with a full and perfect inventory of the rights and credits of the testator, whether the same be in money, specialties or notes, &c., together with a list or schedule of his books of account, &c. &c.

We have spoken of these as first duties of the executor. And although the course we have laid down is certainly the most regular and advisable, since the probate authenticates the right of the executor, and obliges the Court to take judicial notice of him; yet we must not therefore be understood as saying, that he can do nothing until probate. He derives his title from the will, and his authority, therefore, commences on the very moment of the death of the testator. Before probate, he may make his inventory, and take possession of the goods of the testator; may pay and receive debts, and take and give discharges for the same; he may assent to, or pay legacies, and may *commence* suits, and indeed perform almost any act incident to his office.

In another number we shall point out the mode of appointing an Administrator; and then proceed with the rights and liabilities of Executors and Administrators.

Y.

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*Chemistry applied to Agriculture; by John Antony Chaptal.*

It has been quaintly observed by Lord Bacon, that, "Good husbands will find the means, by good husbandry, to improve their lands; but it will not be amiss that they be put in mind thereof, and encouraged in their industries." In view of the truth of this reflection, several writers, within the last century, have attempted to facilitate the labours of the husbandman, by reducing the principles of agriculture to something like system. Among this number, none have done more essential service, than Count Chaptal. This distinguished individual, who was one of the most eminent chemists of the age, was, at the same time, a practical agriculturist, owning large estates, which were, for a long time, cultivated under his personal direction. "In order," says he, "to make useful the science of agriculture, it must be profoundly studied, not only in the closet, but abroad in the fields." By pursuing this method, he was able to describe

processes, and set down the course and the results of his large experience, with a fulness and clearness, that make them immediately available to the practical farmer.

The last edition of Count Chaptal's work on Agriculture, was published in French, in 1829, and was translated, and published in this country in 1835. It presents the completest outline of the science, reduced to practical purposes, which has yet been given by any writer, in the same space. Our endeavour shall be, in the following part of this essay, to make our readers acquainted with the nature and importance of the work. In his introduction, the author strives to impress upon his fellow-citizens of France, the importance of Agriculture to the prosperity and well-being of their country. Its history is traced, from the period when the labours of the agriculturist were clogged by Feudal restrictions and disabilities, to the period, when, a more enlightened system of government gave it a more propitious impulse. The existing wants of agriculture are considered, and the conditions necessary to hasten its progress; and the duties of government to protect its interests, are next exposed. Having introduced these reflections, a few preliminary principles are laid down. Among these, the author has endeavoured to explain the affinity of different vegetable substances for each other. "The laws of vitality," says he, "like all the other laws of nature, are unchangeable. But their action is varied in living bodies by a difference in organization; in the same manner as the products vary in each species, and in each one of their organs. It is this variety of productions which surprises us,—especially when we consider, that their form and their quality are constantly renewed every year, and with every generation.

"These laws of organization have, then, set the bounds, over which science has not yet been able to pass. She has, however, opened to our view some sublime pages of the book of nature; and she has made many and useful applications of their contents.

"The living plant, fixed by its root to an immovable soil, has no power of motion to enable it to seek its support from distant substances. It derives all its nourishment from the earth and air by which it is surrounded. These aliments are elaborated in the organs of the plant. They are decomposed and combined with its elements,

in a regular and uniform manner. With the dead plant, the case is widely different. Upon that, other bodies exercise an action entirely physical. When organization ceases to modify their effects, the same agents, such as air, water, and heat, which assisted it in performing its functions whilst living, concur powerfully in decomposing it when deprived of vitality; and complete disorganization can only be prevented by secluding it entirely from the contact and action of these bodies.

"It is at this period, that chemistry can exercise its power with full effect. She knows the elements that enter into the composition of the dead plant; she knows the various degrees of affinity by which they are united, and can predict with certainty the changes which will follow from the action of these external agents, which she can modify at her will.

"From the observation of these circumstances, it is my opinion, that the knowledge of chemistry can, with advantage, be applied to the labours of the agriculturist. I believe, that, by a better acquaintance with the bodies subject to his management, by uniting well-established facts to a sound theory, by determining with care the effect of all those bodies which can exert any influence upon vegetation, and the modes of their action, we shall be able to deduce principles, the application of which will greatly accelerate the progress of the most important of our arts.

"All the sciences have a natural course from which they never deviate; they begin by collecting and proving facts; and when these facts are well established, they compare them with each other, and deduce from them principles of general application.

"The facts in agriculture are already numerous; but have the modifications wrought by the nature of the soil, the action of manures, the state of the atmosphere, the influence of climate, and the varities of exposure, been sufficiently attended to? Will a fact observed in one place be constantly reproduced in another? Since such is not the case, we must necessarily come to the conclusion, that solitary factsare not sufficient to establish principles in agriculture. It is necessary that they should have been observed and verified, under the influence of all the agents of which I have spoken; and that we should know the modification which each one produces, in order to be

able to draw from them general and practical consequences. If the agents of vegetation were constantly the same, if their effects were everywhere the same, one fact alone would be sufficient to establish a principle, applicable to all localities; but the difference of their actions under different circumstances necessarily produces important changes in their results; and this it is that causes the kind of agriculture that prospers in one country, to be unsuccessful in others; and an agriculturist, who wishes to try methods of cultivation which have succeeded elswhere, often finds himself deceived in his expectations, because he cannot unite the same circumstances to ensure success."

It was after the establishment of such principles, that Chaptal applies himself to forming an acquaintance with the most usual methods of cultivation. This he did, that he might apply them with more certainty to other cases. In applying the physical sciences to agriculture, he seems to have avoided many of those stumbling blocks, upon which others before him had fallen.—He has not written his treatise for the scientific man alone; but he has recollected that he was writing for the agriculturist, and has, accordingly, in most cases, when speaking of such things as relate to him, used that common and familiar language which the farmer would be supposed to speak. Wherever he could do so, he has relied upon his own experience; and where he had not this advantage, he has never ventured an opinion without being sanctioned therein, by the authority of those on whom he could rely. This experience he has reduced to system; and by applying it to the previously known truths of chemical science he has presented to the agriculturist a work which he may well consider a prize of the highest value.

As we have already intimated, it shall be our purpose to make our readers acquainted with the value of this work. After introducing his subject to the reader, in a clear and forcible manner, and proving the necessity of chemical knowledge, to correct analysis and exact experiment in agricultural matters, he proceeds to lay down some of the elementary principles of his science, and to apply them to some of the most important branches of rural œconomy. The first chapter of the work embraces general views of the atmosphere, considered in its effects upon vegetation. In the next chapter, is consider-

ed. the nature of earths, and their action upon vegetation. In this chapter, is respectively treated, 1, Moulds; 2, Soils, and their different natures; 3, The formation of arable lands; 4, The composition of arable lands; 5, The properties of different earths; 6, The methods of rendering them, when mixed, capable of good cultivation; 7, The analysis of arable soils.

Next comes the consideration of manures; in which chapter, the author has some exceedingly valuable remarks, which are applicable to our own country. He herein makes the admirable division of manures, into, 1, nutritive; 2, stimulating manures.

Having considered the nature of soils, and the best means of improving them, he proceeds, in another chapter, to the interesting consideration of the Germination of Plants.

Chapter V. treats of the nourishment of plants, and the influence of water and the various gases upon nutrition; together with the changes which are produced in plants by nourishment.

Chapter VI. treats on the improvement of soils; and, next follows, an admirable chapter on the succession of crops, copied in a former number of this journal.

The remainder of the work, is taken up with a series of chapters on various subjects, relating to French agriculture: among which will be found some valuable matter on the cultivation of the beet root, and the extraction of sugar from it. This last subject has become one of great concern in France. Count Chaptal shows, conclusively, from his own experiments, that sugar, equal to that from cane, can be produced; and at a much cheaper rate. This matter is now occuping the attention of our northern farmers. In some instances they have very successfully idtroduced this vegetable into cultivation. The concluding remarks of Chaptal on the subject, we shall extract:—

"From twelve years' experience I have learned, in the first place, that the sugar extracted from beets differs from that of the sugar-cane neither in colour, taste, nor crystallization; and, in the second place, that the manufacture of this kind of sugar can compete advantageously with that of the sugar cane, when the price of this last is in commerce one franc and twenty centimes per demi-kilogramme (= 18½ cents per pound).

"These facts being established and acknowledged, it may be asked whether the manufacture of beet sugar would be advantageous to agriculture.

"The cultivation of beets will not prevent the production of a single kernel of wheat, since this may be made an intermediate crop, and the sowing of it commenced as soon as the beets shall be dug. The crops of corn are better upon these lands than upon others, because the beets have divided and loosened the earth, and the weedings have cleared it of strange plants.

"The operations upon 10,000 pounds of beets per day, place at the disposal of an agriculturist about 1250 kilogrammes (= 1¼ tons) of mash, which is the best kind of food for horned cattle.

"The working of the beets being performed in winter, furnishes employment to the men and cattle of a farm, at a season when they are too often condemned to idleness.

"Finally, if the manufacture of sugar beets should be carried to such an extent as to furnish a supply for all France, agriculture would receive from it the value of more than 80,000,000 francs per annum.

"The prosperity of an establishment of this kind, depends upon its being connected with rural labours. This kind of manufactory is out of place in towns, because buying beets is much more expensive than raising them, the mash cannot be rendered productive, labour and fuel are more expensive, and there is not, as upon a farm, a supply of labour, both of men and animals.

"But can this manufacture be reconciled with the interests of our colonies?

"Before the revolution, this would have been a diffiquestion to answer. Then, our colonies not only supplied our own wants, but furnished an overplus worth about 80,0000,000, which we exported to foreign countries, particularly to those of the north of Europe. From these we received in exchange timber, iron, copper, hemp, tallow, tar, &c. The loss of our principal colonies has caused this important trade to pass into other hands, and those colonies that remain to us do not furnish sugar enough for the consumption of our own country.

"The government has, at this time, two ends to attain, one of which is, the advancing of the welfare of our colonies, and the other, the encouragement of the manufacture of beet sugar. Both would be accomplished by

prohibiting the importation of foreign sugars. When this is done, the sugar of our colonies will find an advantageous market, and the manufactories of beet sugar will increase in number

"Supposing the wants of France should be supplied by the sugar from beets,—could we not then resume our commerce with foreign nations, by means of our colonial sugar? France would, at the same time, be safe from the danger of privation, and from those variations in price which are produced by a maritime war."

"It is a fact, that if the government do not interest itself seriously in this important subject, neither the colonies nor the manufactories will ever acquire a great degree of prosperity; and one of the finest discoveries of modern times will be lost to France.

At another opportunity we shall notice some of the subjects in this work more at length; meanwhile, we cordially recommend it to the perusal of our planters.

*Richland District, S. C., Oct.* 29, 1836.

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## *Strawberries.*

Charleston Neck.

*Mr. Editor*,—In a former number of your useful journal, I read an interesting article on the cultivation of the Strawberry. Too much attention cannot be paid to this delightful fruit; and, concerning the income which an acre or two will yield, if planted in strawberries, I can, along with yourself, bear the most decided testimony.

For the last five or six years, I have been raising this fruit, upon my farm; and never fail to sell it, at from 25 cents to 50 cents per saucer. If the beds are properly attended, bushels of the berries might be raised, and as readily sold at the above prices.

I shall not enter into an enumeration of the various species of these berries. In a former number of your journal, among the selected articles, will be found, very full information upon the subject.* It will be there found, that they are as various in their kinds, as any other fruit. Much praise is due to our horticulturists, for their zealous endeavours to introduce the various species of the strawberry into our State. The great success they have met with in this respect, has been more than

* See also page 651.

once evinced by the brilliant and luscious displays of this fruit by our Horticultural Society, within the last several years. At its last exhibition, among the other beautiful and delicate varieties exhibited, was one from the garden of Jonathan Lucas, Esq. The fruit measured several inches round, and had every indication of being as exquisite in flavour as it was agreeable in size.

For my own use, I have cultivated the common strawberry of our climate. By care and attention in its cultivation, I am fully persuaded, that it may be rendered more productive than any other, and full large enough to gratify the keenest appetite. However, like all other fruit, the larger the strawberry is made to grow, the coarser does it become to the taste.

I have unconsciously entered into this long preface, Mr. Editor, when my object was, to offer some practical hints to your readers, upon the cultivation of this delicious fruit.

In the article from your pen, to which I have already alluded, you recommend the burning of the strawberry beds, early in March, or during the latter part of February. I prefer doing this at an earlier period, and you shall have my method.

During the month of December, I lay pine trash, or any other combustible matter, over my strawberry beds, and, selecting a dry day for the purpose, I set fire to the entire mass. As the trash burns, it will ignite along with the dry plants, the old decayed leaves of the strawberries, and consume all the old useless suckers.

Immediately after doing this, if your strawberries have grown up the previous year broad-cast, or, as I should otherwise express it, if their suckers have been suffered to take root all over the bed, you should hoe the bed just burnt, in trenches about ten or twelve inches apart, transversely on the bed. After this, well-rotted manure should be scattered in the trenches, and the whole bed should then be covered over with straw or chaff. Tanner's bark will do, if you cannot readily procure the straw or chaff.

The manure, applied as above, will warm the plants, and give them early maturity in the spring.

As soon as the plants shoot forth, the alleys between them should be well stirred, and kept free from all kinds of weeds.

A friend of m' ıe, from the country, tells me, that he has applied cotton seed, with the greatest success, as a manure for strawberries. He applied it in the same way as I recommend the compost to be applied.

I must, however, state here, that no treatment will make strawberries produce well, without transplanting every three or four years. Bearing this in mind, it will be well if we have any plants which are as old as above stated, to transplant during this month. I confess it would have been much better to have done so during the previous month, but having neglected to do so then, it is not too late now.

The plants should be carefully selected, and set out upon a well-manured bed, about ten or twelve inches apart each way. As soon as the plants take, they should be treated as I have already directed.

I remain, Mr. Editor, your obt. servt., P. J.

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## *Non-descript Hedges.*

Charleston, Nov 18, 1836,

*Mr. Editor,—Dear Sir,*—By publishing the following letter, from the late Charles E. Rowand, you will, no doubt, confer information, of a valuable nature, upon some of your readers. It treats of the Non-descript Rose, as an article for hedging, which, permit me to say, I have tried for several years, and can give it my hearty approval. SANTEE.

Charleston, (S. C.,) April 3, 1820.

*Sir,*—Permit me to suggest, among the varieties enumerated in your essays, as fit for hedging, one which I have been trying for ten or twelve years past, and succeeded equal to expectation, known here by the name of *Non-descript*. It is a large, white, running rose, throwing out a vast profusion of flowers, armed with a great quantity of sharp prickles, which thicken and enlarge in their growth. The proper name, I believe, among Botanists is, Rosa Lævigata.

It is impervious to cattle of every description, and defies the attack of a hog. Eight or ten years' experience empowers me to say so with truth. Being a vine, it thrives best on a moist piece of gronud. The mode I adopted to obtain so valuable a fence was, in the first place to

make a post and rail one, sufficient to keep off cattle, (having no ditch or bank) then turn up and pulverize the soil about six feet wide, from the fence, to receive the plants, or cuttings; then make three deep trenches with a hoe, in which you plant the cuttings about twelve or fourteen inches long.

The object in planting in trenches, is for the benefit of hoeing and stirring the earth, to promote the growth of the plant, which would otherwise be overrun by the grass, so rapid is the vegetation in the Southern states. The more moist the season, and the thicker the cuttings are planted, the sooner a fence is formed. In three years, a good, substantial one is obtained; and every year afterwards it strengthens with its growth; particularly if the plants have been well attended. It may be clipt with the shears to great advantage, the first season—and it appears to me, so hardy is the plant, that after having obtained a good growth, the oftener clipt the better, as it tends to make it spread and thicken. Such has been the case with mine. I have on my plantations, many miles, in extent, of the non-descript, both on the post road, leading to Charleston, and fourteen miles distant therefrom, and in the interior of the plantation. Being an evergreen, it is the admiration of travellers passing by. To please the eye, I introduced at about forty or fifty feet distant, the daily red rose cuttings, and the common woodbine and jessamine vines united, which, when in bloom, as they are at present, form a most beautiful contrast, and pleasing sight. I have thus given you a short description of a valuable plant, embracing in itself the *utile* and the *dulce*, to all who will take the trouble to cultivate it as a fence. In my opinion, it is equal to the first of fences; and no doubt it would grow in the northern as well as the southern states.

The proper time of setting out the cuttings, is in January and February.

I remain, very respectfully,
Your most obedient,
CHARLES E. ROWAND.

I. S. Skinner, Esq.

# PART II.

## SELECTIONS.

### *On the value, and mode of construction, of Mud Walls, for farm buildings and enclosures.*

[FROM THE FARMERS' REGISTER.]

I believe no one has given to your very valuable publication, any account of the mode of constructing mud walls for fences and houses; and as I am at this time constructing half a dozen houses with such walls, for negro quarters, upon the place of my present residence, and having also seen much of this kind of building, I have thought that a short sketch of the plan of such houses, the mode of constructing them, together with some account of the results of experiments made some eight or ten years since in this kind of structure, might serve to call the attention of the public to it, as something novel indeed in this country, but at the same time as affording for permanent enclosure, in the absence of ordinary materials, one of the cheapest and most durable substitutes; and for farm houses perhaps the very best material that can be found to fulfil at the same time all the conditions of fitness, durability, cheapness, and appearance. I will premise, however, that I am not going to speak of *pisé* or *dirt walls*, of which the public have heard so much. Mr. Herbemont of South Carolina, has given in the 1st vol. of the Farmers' Register, a high commendation of *pisé* as a material for constructing houses and fences, but he seems to recommend pisé chiefly for permanent enclosure where wood and stone are either too costly, or not to be had: and the South Carolina "Society for the Diffusion of Useful Knowledge," in the 3d vol. Farmers' Register, No. 8, also recommends pisé as a mode of constructing houses and fences. I shall not pretend to question such high authority—still less should I be inclined to add any thing to the much that has been written upon pisé, a mode of building which is said to have its origin traceable back to the days of Rome and Greece, and which is said in the address of the South Carolina Society, above alluded to, to "be the subject of a full article in a work of great authority, the *Cours Complet d'Agriculture*, by the Abbe Rozier, assisted by some of the most scientific men in Europe," and by Mr. Herbemont himself, that "that there is a full description of the manner of building pisé houses and walls, to be found in one of the volumes of the American Farmer of Baltimore, and in Rees' Cyclopœdia. It may also be probably found in several other books." I have mentioned these authorities upon the subject of pisé, chiefly that the subject may be the more readily investigated by those who desire to compare it with what I shall call *mud walls*, and I would invite this comparison, especially by those who have read Mr. Herbemont's article in the Register above referred to; because I think he has there, in his zeal for pisé, opposed the influence of his name too hastily to the introduction of the more simple and

humble, but not the less useful system of "mud walls," when he says, "this mode of building *(pisé)* must not be confounded with what are called 'mud houses,' and which are inferior in every respect"—if indeed Mr. Herbemont meant here to refer to the kind of mud wall which I shall describe.

I have been unable to ascertain the origin of the mud wall mode of building. Rees' Cyclopœdia is silent upon the subject, with the exception of the following remark under the head of "Walls." "Rammed earth walls, as well as those formed of muddy clay, answer very well in some intentions, being very close, compact and warm." Loudon in his "Cyclopœdia of Cottage, Farm, and Villa Architecture, &c." p. 77, gives the mode of building the mud walls of cottages in Cambridgeshire, England, but this process is totally different from the one I shall describe. General John H. Cocke of this State, constructed the first mud walls for houses and enclosures which I have ever seen or heard of in this country, and in answer to some inquiries lately made of him upon this subject, he writes: "I know of no person in our country who has built mud walls but myself. It was not an original conception of mine, it having been in use for centuries in Europe. I was put upon it from reading of it in agricultural and rural economy books: and finding a Welshman in my neighbourhood, 15 or 16 years ago, who had been accustomed to making walls of that description in Wales, I made my first experiment with his assistance, shortly after that time, upon a farm yard wall, which is now as firm as it was the day it was put up." So you see, Mr. Editor, I shall be unable to attribute to my mud walls the antiquity of Greece or Rome, or to recommend them to the public notice by citing any learned treatises upon them by learned men. I regret indeed that they have no such aid, for I verily believe they merit this last as much as pisé—or if they have any such aid, that my ignorance renders me unable to adduce it. But be all this as it may, I will now proceed to state the *results of some experiments* with mud walls for houses and fences, and then explain the *mode of construction*, so that an intelligent public may judge if there be really any thing valuable in this mode of building, and that those who choose to practice it, may have the few simple rules required to guide them.

The farm-yard wall mentioned above in the extract from General Cocke's letter, forms three sides of the enclosure of a barn yard upon the Bremo estate. It was put up about the year 1820 or 1821, is based upon a rough stone foundation without mortar, or upon what is called dry masonry—the foundation wall being about 20 inches wide, and rising 6 inches above the surface of the earth. The wall is about 7 feet high, and covered with common pine slabs nailed upon a rough frame in the form of a roof. This wall is perhaps more perfect than it was when first put up, having become harder with the lapse of time. I have never known a mud wall built without a stone or brick foundation, but I am decidedly of opinion, that one would stand well without any such expensive aid, if built upon a tolerably dry locality, nor do I think the wood capping or covering by any means *essential* to that degree of preservation which simple utility, (and not appearance,) would require. I state these *opinions*, however, rather to shew my conviction of the durability of this kind of wall, than from any desire to have them acted upon. In truth, I have in this instance given my opinion when I had only intended to state facts. I hope they will not be confounded. Gen. Cocke has also a stable and a quarter at Bremo

with mud walls, which have been standing several years, and are found to answer every expectation. He has also enclosed a lot and house in the village of Charlottesville with a mud wall, which has been standing eight or ten years without injury.

Upon my four plantations in the county of Brunswick, there are upwards of thirty mud houses, (each double 19 by 30 feet, with a stone chimney in the middle,) for negro quarters, besides overseer's houses of larger size. These houses are however all plastered on the outside with lime mortar. The first of them was built about eight years ago, the others successively added until they were all completed about the year 1832. None of these houses have since required any repair—the walls promising to stand as long as the roofs are kept upon them. They constitute, I venture to say, the handsomest improvement in the way of farm houses, to be found in the State of Virginia, and cost the estate not the outlay of one cent, except for the trifling article of nails, and have been found to reduce, for several years past, the doctor's bills to a most felicitous *caput mortuum*. In building these houses, a good stone mason belonging to the estate constructed the chimneys and foundations of *stone*, an abundance of which was found at hand; and with his aid and under his direction, the ordinary plantation hands put up the walls, a coarse negro carpenter executing the wood work. Sheer truth and justice, however, require me to state, that all these improvements were made under the eye and superintendence of the very intelligent and enterprising steward of the estate, Mr. Richard D. Powell, according to instructions given him.

A *suitable soil* is a prerequisite to the use of mud walls; any soil, however, will do for this purpose which will make pisé, or brick. A pure clay will do, but this is not so good, being liable to crack in drying. A soil of clay and sand in proportion of one of the former to two of the latter, is I think the best. But lest some imaginary difficulties might arise here in the minds of some as to the necessary qualities of the soil to be used, I will state it as my belief, resulting from experience, that almost any soil will answer well which will make a good stiff mud, such as is every where known to be used by negroes in daubing or chinking their houses, and which may be found upon most plantations in ninety-nine places out of a hundred.

When a mud wall is to be built, a *foundation* of dry masonry or brick must be previously prepared by any rough mason, rising six inches above the top of the ground, and as deep below as the nature of the soil may require. The foundation wall will usually be 20 inches thick. At a distance of three feet from the outside base of the foundation wall, draw a line parallel to the wall, and throughout its length; lay off six feet from this line and draw another, parallel to it upon the ground. The space included between these two lines is to be spaded up to the depth of 9 inches; and then, after a good rain, or after adding water, hauled if necessary for the purpose, the earth must be worked up into a stiff mortar or mud, by treading it with oxen. This done—which indeed may be considered well done when the mud would be thought half prepared even for coarse bricks—the three men who are required in the operation, each with a spade makes a layer, a *spade full* thick, of the mud upon the *berm*, or margin next the wall. As soon as this is done, one of the men with an arm full of sound *wheat straw*, begins at one end of the layer and spreads the straw before him upon mud, walking upon it as he passes along, and having it just thick enough to prevent the mud sticking to his feet as he passes on. A

second layer of mud is next piled upon the straw, then a layer of straw, then mud. &c. until the mud first prepared is laid in a pile upon the berm, with the straw distributed through its mass in the manner just described. The next operation is to commence the wall. For this purpose, two men are provided each with the common manure fork of iron with three prongs, and a handle of four or five feet. One of these men stands upon the pile of mud, the other upon the wall—the first with his fork places the mud upon the wall in reach of the man there, who with his fork takes it up and throws it strongly into its place. This process is continued until the wall is raised about *three* feet, and extended some three or four feet in length, when another man with a common spade, ground to an edge, cuts off the mud which overhangs the foundation wall, making the corners of the wall square and plumb, and the sides plane. Should it be desired to give the wall a smooth surface, a second trimming with the spade would be advisable after it has had time to dry a day or two, when it would be found to trim much more evenly; and the man who trims should be guided by a *plumb and straight edge.*

The first course of the wall being thus finished, it must be left a few days to dry, and become hard enough to bear the superstructure. In the mean time, the mud may be prepared in the same place and as before, and the process thus continued until the required height is attained, raising the wall at each layer about *three feet.* Some little experience will be required, to teach the proper degree of stiffness to be given to the mud to prevent its slipping when first put upon the wall, and that it may be cut easily by the spade.

My quarters are, I think, of a good size, and of an economical form —each roof covering two tenements; these last having each an interior space of 16 by 13 feet: a brick chimney in the middle giving a fireplace to each room. The houses are generally placed with their gables to the east and west, with a door to the south, and windows in the north side, the better to exclude the sun and let in the air in summer. They are placed on a street 100 feet wide, and the houses upon the same side of the street 60 or 70 feet apart, as a security against the progress of fire. They have all plank floors, which certainly contribute to health when a marl floor cannot be had. All my houses are plastered on the outside, but I am perfectly satisfied that this is unnecessary except for appearance sake; and perhaps whitewash occasionally applied would be all that is necessary even to secure a good appearance. In putting the roof upon a mud wall, a plate of timber 5 by 20 inches should be first placed upon the wall, properly framed at the corners, upon which the joists are to be placed, and then the roof constructed as usual, taking care to have an eave of about 1 foot projection. The door and window frames are made of three inch plank, having the width of the wall; and framed to the proper size. These are placed on as the wall progresses, and the mud built up to them.

PHILIP ST. GEORGE COCKE.

*Surry, Va., May* 31*st*, 1836.

## *On the Diseases of Sheep.*

[FROM THE SILK CULTURIST.]

The great losses which wool growers frequently sustain in consequence of the sickness and death of large numbers of their flocks, has induced us to compile from a rare and valuable English work a synopsis of the diseases to which sheep are liable, together with the symptoms by which they are known and the treatment by which they are remedied. The causes of the disease are in some cases assigned, and it is believed if they are carefully avoided and the remedies promptly and faithfully applied, the loses from disease and death would in a great degree be prevented, and the profits arising from their fleeces and young materially increased. As the remedies are simple and the ingredients composing the prescriptions within the reach of every farmer, it is to be hoped that every wool grower who has the misfortune to have a diseased flock, will give them a thorough trial.

*Fever.*—Fever in sheep is an inflamed state of the blood, disordering the eyes and mouth, and affecting the whole body, though not visibly. When any of the symptoms of a fever appear, the feet of the sheep should be examined, and if found to be hot, there is no doubt of the character of the disease. Other diseases will produce an inflammation of the eyes and mouth; but hot feet are an infallible symptom of fever. This disease is often fatal in itself, and frequently induces others which are equally so. The cause is generally a cold. When only two or three of the flock are affected by it, the case is less desperate: but when many are attacked with it, it is more fatal.

The remedy is to keep the sheep in warmer and more sheltered places, bleed and give the following medicine. Heat a quart of ale, and dissolve in it an ounce of mithridate—add half an ounce of Virginia snake-root and one drachm of cochineal in powder. This quantity serves for four doses, and one of them is to be given morning and evening. If the sheep is bound in its body, an ounce of lenitive electuary is to be mixed with each dose; but if looser than ordinary it ought not to be checked as it will contribute to the cure.

*Purging.*—Leave nature to her course when a purging comes on with a fever; but when the fever is abated it should be stopped; and the same remedy that answers for this purpose, may be adopted for such purgings as come on of themselves. Boil a quarter of a pound of raspings of logwood in two quarts of water, till but a quart is left, and when it is nearly boiled down, put in a stick of cinnamon, strain it off, and give the sheep a quarter of a pint, four times a day, till the purging ceases.

If this does not produce the desired result, the following addition will render it sure of success. To every dose add a quarter of an ounce of diascordium without honey, and ten grains of Japan earth powdered, and give the doses only morning and evening.

*Tag.*—The tag is an external disease, owing to the complaint last named. It is a distemper of the tail beginning with filth and foulness, and ending in ulceration. The tag is situated in the inner part of the tail—it consists of scabs and sores, very painful and wasting to the animal, and is owing to the fouling this part by a purging. That tag is worst which follows a fever, because the inflamed state of the blood tends to increase the disorder, and when it begins, during the continuance of the disease, the matter of the fever may chance to settle it

there. Two things are to be done; the first is to stop the purging; and the other, to clean the tail.

The last mentioned remedy, either in its weaker or stronger form, is to be used to stop the purging; and the tail being clipped, and the sore part laid bare, first wash it with milk and water blood-warm, and then with lime water. After this turn the sheep into a clean dry pasture. Two days after look at it again, and, if not well, repeat the washing, and anoint it with grease and tar mixed together. Twice doing of this is generally sufficient to complete the cure.

*Diseases of the Lungs.*—Sheep are subject to be diseased in the lungs, which is easily perceived by their breathing, or by their coughing. Nothing requires a more speedy remedy; for they grow incurable, when it is neglected but a short time, and die as men in the consumption. Change of their pasture is essential to the cure—without it no remedy is effectual. It is owing to cold, and generally attacks sheep that have been kept on low grounds in wet weather.

When any of the flock exhibit symptoms of diseased lungs, drive them into an enclosed pasture where there is short grass and a gravilly soil; and where there is spring or other running water. Bruise a basket full of the leaves of colt's foot, and press out the juice. Bruise a quantity of plantain leaves and roots together, and press out the juice. Mix these, and bruise as much garlic as will yield about a fourth part as much juice as one of the others. Mix all together, and add to them a pound of honey, an ounce of aniseeds, and an ounce and a half of elecampane. Give a quarter of a pint of this warm, to every sheep that is affected, once in a day, and it will by degrees make a perfect cure.

*Jaundice.*—Sheep are more subject than any other animals to obstructions of the liver. When this is the case it is seen in a yellowness of the eyes, and a tinct of the same kind in the skin. Farmers in some places, call this the choler, or, in their language, the color.

When sheep are attacked with jaundice they should be put into an open pasture, and kept in moderate motion, but not fatigued. Boil in four gallons of water two pounds of fennel roots, the same quantity of parsley roots, and twice as much roots of couch-grass, all cut small. When the water is very strong of them, and there is about half the quantity left, strain it off, by pressing it hard. Bruise as much great celandine as will yield three pints of juice, add this to the liquor, and put in three drachms of salt of steel. Mix all together, and every day heat so much of it as will serve to give every sheep that is ill, a gill and a half for a dose. This, with the forementioned directions, rarely fails of a cure.

*Stoppages in the Throat.*—Sheep affected with stoppages in the throat, wheeze and breathe with difficulty. It is commonly occasioned by bad pasturage and colds. The remedy is to put them on higher ground, keep them warm and give them the following medicine. Bruise a good quantity of penny-royal, and squeeze out the juice. Put to a quart of it a pound of honey, and half a pint of sharp vinegar. Give half a pint of this, blood warm, every night.

*Sturdiness.*—This is a giddiness in the head. It is owing principally to rich feeding. The remedy is as follows:

Bleed profusely and give the following medicine. Bruise some roots of wild valerian, squeeze out the juice, heat it, and give a quarter of a pint. Repeat the dose every four hours. When the sheep is recovered, turn it upon the common, or into some barren hilly pas-

ture. It will be kept from relapses by having but little food, and that perfectly wholesome. If the disease returns it is commonly fatal.

*Wood Evil.*—This disorder is a kind of cramp. It seizes the legs and will often attack a whole flock at once. The cause is cold and wet. Laying under the drip of trees in raining seasons has often occasioned it, and hence its name.

In order to effect a cure the sheep must be removed to a dry pasture and then proper remedies may take effect. The following medicine is recommended. Boil in a large quantity of ale as much common cinquefoil and hedge mustard as can be well stirred into it. When the liquor is very strong, strain it off, and add a pint of juice of valerian root to every gallon. Give half a pint of this, morning and evening. Boil in vinegar a large quantity of the leaves of hedge mustard, and with the liquor hot, rub the legs.

*Staggers.*—Sheep as well as horses, are sometimes afflicted with the staggers. It is occasioned by improper food. Oak leaves and buds are particularly prejudicial. They bind the bowels, and staggers frequently follow. The symptoms are the same as in sturdiness, but more violent; and there is generally a trembling, at the same time, in all the limbs.

To cure this disorder dissolve an ounce of assafœtida in two quarts of water. Give a quarter of a pint, warm, every three hours. It commonly opens the bowels at the same time that it takes immediate effect on the nervous system, and thus performs a cure. When the sheep are recovered, let them be kept out of the way of a return of the same food, and they will be in no danger of a relapse.

*Scab.*—This is a disorder to which sheep are very liable. When they are kept in dry wholesome pastures they are but seldom afflicted with the scab; but when they are on low wet grounds, or get under the drippings of trees in bad seasons they are frequently affected by it, in the severest manner. The symptoms are scurfy skins, which in a little time rise to scabs—the wool grows loose and the sheep pine and become lean.

If they are attacked in a season when they can be sheared, it should be immediately done, as nothing is so sure to effect a cure. If the season will not admit of shearing, they must be washed with soap suds, made very strong, and used warm with a piece of flannel or a brush. After this, they must be turned loose into a clean pasture and driven up again as soon as well dried, and the sore parts of the skin must be well wetted with lime water. The scurfy part of the skin must be regarded; and the doing this three times, at two days distance each, will generally effect a cure. But if it fail, the parts that have been thus washed and cleaned, must be anointed with a mixture of equal parts of tar and grease, and they will soon be perfectly well. No inward medicines are required, for the complaint is only of the skin.

*Red Water.*—This is an inflammation of the skin that often raises it into blisters, in which are contained a sharp humour, thin, watery and coloured with blood. Nothing should be done to strike it in, but the cure must be effected by correcting the bad state of the blood. Sheep afflicted with it should be separated from the flock, otherwise it will be very apt to spread through the whole. They should also be put into a pasture where the grass is sweet and where they can have access to good water.

Mix half an ounce of sulphur with an ounce of honey; work it well together, and then divide it into two parts. Dissolve one of those in

half a pint of juice of nettles, and give it every day for a fortnight. Slit the blisters when they are full of this watery humour, and having let the matter out, wet the place with juice of wormwood. After four days of this course, bleed them; and then continue the same method till they are well.

*Foot Worm.*—Sheep are liable to breed worms between their feet; principally, however, when they are kept in wet pastures. It is very painful to them, and will make them pine away. It is perceived by their frequent holding up one foot; and by setting it tenderly down.

Let the foot be washed clean, particularly between the toes, and there will be found a little lump like a tuft of hair. This is the head of the worm. It is to be taken out with care, for it is of a tender substance, and if it be broke in the foot, it will occasion inflammation. The best method is to open the flesh on each side of it, and then, by means of a pair of nippers, to take it out. Dress the wound with tar and grease melted together in equal quantities, and turn the sheep loose. It is better to put it into a fresh pasture; for if the same disorder returns, it is generally worse.

*Wild Fire.*—This is a violent inflammation, not unlike the Saint Anthony's fire, upon the skin in different places: and generally affects the whole flock. Our forefathers used to bury the sheep alive with its feet upwards at the door of the fold, superstitiously believing that it acted as a spell to drive away the disease. The following, however, is a more modern and rational method of cure.

Separate such as are affected with the disease from the flock, bleed, and prepare the following external remedy. Bruise the leaves of wild chervill, and add to them as much lime water as will make the whole very soft. When it is beat up together, add as much powder of fenugreek seed as will reduce it to pap; then put it into a pan, and set it in a cool place. Rub the inflamed part carefully with this every evening, and make as much lie on, as can be kept there; it will take effect during thy time of rest, and is to be repeated as long as there is occasion.

*Disorders of the Eyes.*—Sheep are often affected with colds falling upon their eyes, and almost blinding them; and, at other times, the same accident even without any visible cause. The remedy in either case is the same. Press out the juice of great celandine, and drop a quantity of it into the eyes night and morning.

*Dropsy.*—Sheep are often swelled with water in their bellies; and this, if not regarded in time, is certain death. There are two ways in which it is lodged; the one is between the outward flesh and the rim—the other within the rim. In the first case the cure is easy; in the other, nothing can be done.

The method in the first case, is by a coarse kind of tapping. An opening is to be made in the flesh, and a quill thrust in. This will give the water a free passage out, and the wound heals of itself. But when the sheep is emaciated, nature will not have strength to heal it; and the sheep must be examined daily, and the wound dressed with tar and grease. It must also be put into a fresh, dry and wholesome pasture, and then disposed of as soon as recruited; for this is a disorder that never fails to return upon any mismanagement in keeping.

*The Rot.*—This is the most destructive disease to which sheep are subject. Like the murrain it is contagious and generally spreads through the whole flock, and often over the neighbouring country.—Flocks that are fed upon open commons are more subject to it than such as have shelter, and are taken care of at night. It frequently

prevails in cold seasons and when dribbling rains come on soon after shearing. Want of food will also occasion this disease; as will likewise the eating of such grass as is full of unwholesome plants. These are among the causes of this fatal distemper; but the worst and most common is infection. Keep sheep out of the way of these causes of the rot, and the same care will preserve them from most other disorders to which they are liable; damp grounds are always dangerous, and especially in wet seasons.

When a sheep is infected with the rot, the white of the eyes looks dull, and they have a faint aspect, the animal is feeble and his skin is foul—the wool comes off in handfulls with the least touch and the gums look pale and the teeth foul. He will also be dull and listless in motion, and heavy, as if his legs were not able to carry him. Many are generally infected at a time, and the first care must be to remove them from the sound ones, and put them in a close fold. They must have but little water, and their food must be dry hay and oats. Bleeding is destructive in the rot. The fact that sheep fed in salt marshes never have the rot, suggested salt as a remedy. It is a good preventive, but not an infallible cure. Though the farmer cannot rely upon it, yet among other remedies, it is highly useful.

The following remedies and treatment have often effected cures. Bruise an ounce of the grains of paradise, and four ounces of juniper berries dried; add to these four pounds of bay salt and a half a pound of loaf sugar, grind them well together, and sprinkle some of this upon the hay and oats that are given to the sheep. Let this be continued three days, and look from time to time to the eyes, and examine every other way, to see whether they mend or grow worse. If there be signs of amendment, let the same course be continued; if not, the following must be used. Steep four pounds of antimony in two gallons of ale for a week—then give the sheep this, every night and morning, a quarter of a pint at a time. Boil a pound of the roots of avens, and two pounds of the roots of master-wort, in two gallons of water, till there is not more than six quarts remaiuing—strain this off, and press it hard, then pour a pint of it into a pail full of water, that is to be given to the sheep for their drink.

By these means, carefully managed, and under a good regulation in cleanness, dryness and warmth, the rot will often be cured. This is all that can be promised—for there are times when the disease is so rooted, and when the temperature of the air so favours it, that nothing will get the better of it. If the sheep have a distaste to their food, because of the salt and other ingredients mixed among it, they must be omitted for two or three feedings, and then given in less quantity.

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## *Turnip-rooted Cabbage below Ground.*

[FROM THE YANKEE FARMER.]

This long, awkward and apparently improper name is given to a root which is raised in the same manner as the Ruta Baga or yellow Swedish turnip, is used for the same purposes, and when growing appears very much like it. It is white inside and out, the genuine Ruta Baga is yellow; and is oval on the top and the leaves are in a small bunch on the crown, the Ruta Baga runs up considerably upon the ground in a piked form, which part is covered with leaves; it keeps better than the Ruta Baga, keeping perfectly good either in the ground

or in a cool cellar till they begin to grow in the spring. We cultivated them in rows by the side of the Ruta Baga and they yielded 20 per cent more. We were very exact in our experiment—each kind were set at the same time, in alternate rows and the produce weighed. These roots are very crisp, and many that have eaten of them think they are equal in quality to any turnip. When raw they look and taste like the heart of a cabbage stump. When cooked in the spring they can hardly be distinguished from English turnips taken from the ground while growing, and in their best condition. The plants are very hard; we observed that where transplanted in a dry time, they faded less than the Ruta Baga. They required rich mellow ground. They will grow well with or without transplanting, on soil rather moist or tolerably dry. We have been most successful in raising them on ground that was broken up the year before and planted with corn or potatoes. If the ground has been ploughed several years they will be liable to be injured by lice, and the same remark will apply to the Ruta Baga. Though much is said concerning the Ruta Baga, the turnip-rooted cabbage is hardly named by agricultural writers. We think it is the better of the two, as it yields more, is more hardy, keeps better, is superior for table use. Cattle are remarkably fond of them as they have a cabbage taste, and if the ground freezes up before they are harvested, they will keep through the winter as well as a parsnip. Perhaps we exaggerate as to the value of this vegetable, but we do not intend it; our opinion corresponds with that of others who have tried them. We have raised some that were very large—one weighed 15 lbs. We raised at the rate of twelve hundred bushels to the acre; on land that was tolerable rich, planted with corn the year previous. The ground was ploughed and harrowed, then we made drills about two feet apart, five or six inches deep, put in some old manure—threw some earth on the manure, and then set out the plants about ten inches apart, so that they might not cry, *lay further* when they grew large. It would be less work to sow the seeds, where the plants are to stand, and when sowed rather late they will produce more, as transplanting retards their growth for a while. We advise all who cultivate the Ruta Baga either for stock or for table use, to try the *turnip-rooted cabbage below ground*. Every farmer and gardener should try it, and if any one is unwilling to pay 6¼ cents for seed, we will give a *thimble-full* to every one who will call or send for them, unless our stock becomes exhausted, and that with good management, will be sufficient to raise many bushels. They may be sowed till the 20th of June, but the sooner the better.

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## *Peach Trees.*

[FROM THE NEW-YORK FARMER.]

*Esteemed Friend*—If the following method of destroying the worms which infest peach trees is worthy of insertion in the "Farmer," it is at thy service. The experiment would probably succeed wherever it is tried.

In a recent conversation with an individual concerning fruit trees, he remarked that he had seen in the State of Pennsylvania, peach trees of such uncommon size, that he was induced to ask the owner what means he resorted to in raising them. After some hesitation, he informed him, that from the second year of the growth of the trees, he

sought for traces of the gum, which is a sure indication of the worm beneath. He removed this so as to expose the aperture into the body of the tree, and then filled it with quick lime. This was repeated every month, the roots being carefully examined as well as the body. He also stated to my informant, that it would be impossible in many cases to find the worms on account of their diminutive size, they being so small at first as to be visible only with a powerful microscope.

The greater number of his peach trees were from ten to twelve years old, and seemingly as vigorous as any he had ever seen, with a large crop of fruit bending their branches to the ground.

A peach tree it is said bears only three years, and is about that period in coming to maturity; whereas by the above plan, it will continue to produce fruit for much longer period. The high prices paid for peaches in our large cities, ought to induce farmers to give a little consideration to the best methods of preserving their trees. J. C.

*Burlington, Sept. 1st*, 1836.

We are much obliged to friend J. C. for his communication. We can testity the truth of his remarks from our own experience. We have seen a peach tree, that was considered to be past help, restored to fine condition by similar treatment.

Any one can satisfy curiosity by inspecting a poor looking peach orchard.

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## *On the Culture of Strawberries.*

[FROM THE GENESEE FARMER.]

As the time is now approaching, when those who intend to form beds for raising this cheap and delicious fruit. should make the necessary preparations, a few brief instructions on the subject may not be unacceptable.

*Varieties.*—The following are a few of those which rank among the best and most desirable varieties. Austrian Scarlet, or Duke of Kent; Grove End Scarlet; Roseberry; Keen's Seedling; Methven; Old Pine; Red and White Alpine; Bush Alpine. The Austrian Scarlet is the earliest of known varieties, and is also of excellent flavour. The red and white Alpine possess the advantage of ripening, when properly managed, through autumn till winter; we have seen a dish of good fruit, picked on the first day of December. The bush Alpine possesses the same advantage, and the additional one of not spreading by runners; it is not, however, a first rate bearer, nor is the fruit of the very best quality.

*Propagation.*—With the exception of the bush Alpine, which is only increased by divisions of the root, all the varieties multiply spontaneously every season, by numerous runners from the parent plant, which, rooting and forming a plant at every joint, only require, for the production of fruit in abundance, removal to a bed where they may have room to flourish. Such plants will bear the summer succeeding the planting, and in the second year will be in full perfection. The best way is to supply a new plantation, with plants which have been taken from runners and set out in nursery beds the previous season. But where such cannot be had, those of the present season will answer.

*Soil and situation.*—Strawberries will grow and produce fruit on almost any soil of moderate fertility; but they are most productive on a deep rich loam. They should be in an open situation, exposed to

the sun and air, and not under trees. The Alpine strawberries, however, admit of being placed in a more shady situation, as it is during the hot and dry season of the year that they are intended for bearing; which they will not do if allowed to suffer from drought; and few are willing to take the pains to water them as much as they would require.

*Transplanting.*—The best time for doing this is in the spring; but if performed with proper care, they succeed nearly if not quite as well when transplanted early in autumn, say in the early part of September. The ground should be well manured and dug, a month before transplanting. The chief care required when the work is done in autumn, is to guard against the plants being thrown out by frost, which is best effected by treading the soil closely about the roots.

*Culture.*—The distance of the plants asunder, where the soil is rendered *sufficiently fertile*, should be, for the larger varieties, (such as Methven and Keen's seedling,) twenty inches from row to row and fifteen inches in the row; the smaller varieties may be a little nearer together. This distance may seem too great, but it is much better than crowding the plants too closely, which is the more common error. It is only by affording sufficient room for the plants to receive the benefit of sun, air, and of culture, that the fruit will ripen early, and acquire a good size and agreeable flavour. Keen, of Isleworth in England, a most successful cultivator of this fruit, and who raised the celebrated Keen's seedling, says, in speaking of the large distances he adopted in planting,—"these distances I find necessary, for the *trusses of fruit* in my garden ground are frequently *a foot long*." The following is his method of culture, in his own words: "After the beds are planted, I always keep them as clear of weeds as possible, and on no account allow any crop to be planted between the rows. Upon the growing of the runners, I have them cut, when necessary; this is usually three times in each season.* In autumn I always have the rows dug between; for I find it refreshes the plants materially; and I recommend to those persons to whom it may be convenient, to scatter in the spring, very lightly, some loose straw or long dung between the rows. It serves to keep the ground moist, enriches the strawberry, nd forms a clean bed for the trusses of fruit to lie on; and thus, by a little extra trouble and cost, a more abundant crop may be obtained. A short time before the fruit ripens, I always cut off the runners, to strengthen the root; and after the fruit is gathered, I have what fresh runners have been made taken off with a reaping-hook, together with the outside leaves around the main plant, after which I rake the beds, then hoe them, and rake them again. In the autumn, unless the plants appear very strong, I have some dung dug in between the rows, but if they are very luxuriant the dung is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. I also have to remark, that the dung used for manure should not be too far spent; fresh dung from the stable door, is preferable to spit dung, which many persons are so fond of."

In thus recommending a thorough method of culture, we would by

*Lindley says, in speaking of the Alpine strawberries, "If the runners are planted out in August or the beginning of September, the beds will be covered with runners by spring; these should not be removed as directed for the other classes, because the first and strongest of them will produce fruit during the autumn, and continue in succession to a late period of the season. But a succession of finer fruit than these is produced by cutting off all the flower stems as soon as they begin to blossom, from their commencement in the spring till the end of June. By this means a most abundant supply of the very finest fruit is produced from the end of July till frost sets in."

no means wish to discourage those who have not yet attempted raising this excellent fruit, and who think they cannot afford to adopt such culture, from attempting it altogether; indeed, if proper varieties are obtained, good crops may be had with little or no care after transplanting; we have known beds almost untouched for years to yield plentifully. Nevertheless, we consider the *cheapest* method, ultimately, of raising this fruit, is by thorough culture; that the greatest amount of fruit is obtained in this way for the care and labour expended, and that the quality is so much superior to that obtained from slight culture, as to give the former practice very decided advantages.

When the beds have much diminished in their product, new plantations must be made to supply their place. This generally takes place in four or five years.

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## *The Persimmon. (Diospyros virginiana.)*

[FROM THE GENESEE FARMER.]

The Persimmon tree perfectly matures its fruit in the Genessee Country, though we have not seen it growing indigenously further north than the banks of the Susquehanna near Catawissy. It is entirely hardy. The fruit is pleasant, "in form and bigness like a date, very firm like that fruit, and almost as sweet," and we think it well worthy of the attention of those who have a taste for varieties.

This tree belongs to Polygamia Diœcia of the Linnæan system—the male flower growing on separate plants, while those which produce the fruit have hermaphrodite flowers. Botanists have considered that the anthers of the latter were effete and useless. On examining both kinds of flowers, however, we discover nothing to warrant the conclusion; and we were strengthened in our doubt by the circumstance of a large grove of these trees, all originating from one root, that were productive; while no male or barren tree was known to exist in the neighbourhood. The case seemed to be nearly analagous to what often occurs in our wild grape and in the strawberry; and we therefore made the following experiment: One persimmon tree had not failed to bear fruit for several years. At the distance of twenty feet from it on the west side, stood a tree which produced only staminate flowers, and another at twice the distance on the east side. In the year 1832, we cut down both the male trees just as the fertile flowers were beginning to open, and immediately removed them so that none of the pollen could reach those flowers. The consequence was,—*not a single persimmon was produced in four years.* Vigorous suckers, from the stumps of those trees, however, sprung up; and this spring we observed that one of them had a few flowers: *The fertile tree is now once more set with fruit.*

From this experiment, which we made at our cost, both nurserymen and customers may learn the futility of planting out a single tree, far remote from all others, with the hope of its bearing fruit. We have seen a tree that was set out when no other was known to be within hundreds of miles. Neither the nurseryman nor the purchaser, knew to which *sex* it belonged, and it is doubtful if the proprietor knows at this day, for it has always been barren. Our advice to such as wish to cultivate the persimmon, is therefore to buy trees *in pairs*, and to buy them of those who are worthy of their confidence.

## *Morus Multicaulis.*

[FROM THE HORTICULTURAL REGISTER.]

BOSTON, July 25, 1836.

Since I have been in this country I have heard of several complaints, chiefly from the Hartford Mulberry tree planters, of the difficulty experienced the last two years in making the *Morus Multicaulis* stand your winters well.

This kind of mulberry is easily acclimated, if a proper mode of culture be adopted in the places where it is planted.

In Belgium, the winters, notwithstanding they are not so severe as yours, often give us great trouble, and the influence of the cold was repeatedly experienced on these Mulberries, which were often killed down to the roots.

The late *J. Le Candele*, of Humbeck, near Brussels, suggested the idea of having different modes of experiment adopted in distant places. And the one which proved most efficient, was to cut down yearly, the Morus Multicaulis, in the same manner as is done with willows in a *Salictum*, that is to say, at a few inches above the soil, and to cover the remaining trunk with dead leaves; in three or four years, the roots being stout enough, they did not require any more covering. From the buds preserved on the plants, fine and hardy shoots came forth, giving larger and more lively leaves to feed the silk worms upon.

It has since been stated to me in a letter from Batavia, (island of Java,) that this mode of culture is much in use near Manilla and in China, not on account of the cold, but in order to keep the Morus in a shrubby state, which affords greater facility for gathering the leaves in the season when desired. There the mulberry seems to be planted in fields as Indian corn is here,—in the fall of the year the plants are deprived of their branches, the number of which is continually increasing, and growing in one season from five to eight feet—which growth is fully equalled by our own. I would advise a similar experiment in this State; it might, perhaps, answer well.

Most respectfully, your ob't servant,

EMILIEN DE WAEL.

To HON. ELIJAH VOSE, *Pres. Mass. Hort. Society.*

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## *Egyptian Wheat.*

[FROM THE SILK CULTURIST.]

We learn by a letter from Mr. John Calkin of Elizabethtown, Essex County, N. Y., that he has a new variety of Wheat, which he believes to be the true Egyptian. It was originally taken from a wild goose, has a number of small heads growing on each side of the principal head and making a head an inch or an inch and a half in diameter, and containing in some instances 150 kernals of grain. It is more productive than common wheat and is not liable to smut or the attacks of the weevil. It is a spring grain and requires early sowing. Mr. C. being desirous to contribute his mite towards the improvements of the present age, requests us to say to such farmers as wish to procure seed that he will furnish them on making their applications to him, post paid. We are inclined to the opinion that it is a valuable variety and worthy the attention of wheat growers.

## *To obtain Onion Seed.*

[FROM THE GENESEE FARMER.]

The best time to set out onions for seed is about the middle of October. This is preferable to planting them in the spring, as the bulbs will have time to throw out fibres and become well rooted; and they will produce more full and certain crops of seed, than if deferred till the latter period.

Roots of a suitable size, and the hardest and best shaped, should be selected, and when different varieties are to be raised, the roots of each variety should be planted remote from the others, in order to preclude any danger of their becoming mixed.

The ground should be light, rich, and well dug, and the onions should be planted in drills about one foot apart, and from six to nine inches asunder in the drills. The drills should be dug about five inches deep, the bulbs placed evenly in the bottom, and then covered at least three inches above their crowns with earth. It will be most convenient to make the drills by a line stretched over the ground, and to complete one before another is commenced.

The plants will appear above ground early in spring, and in the early part of summer will have attained their full height. In order to support the stalks, and prevent the weight of newly formed seed from breaking them down, stakes should be driven, in all the drills, at distances of a few feet in each, and pack-thread, or small pieces of bass matting, run in double lines along the row of stakes, passing on each side of the stems, a little below the heads; these double lines may be connected at intervals by short pieces tied across.

When the seeds are ripe, the heads are cut off, spread thinly over cloths or newspapers to become thoroughly dry, and afterwards shelled out by rubbing, cleaned and preserved.

# PART III.

## MISCELLANEOUS INTELLIGENCE.

***Fruit kept sound in Cotton.***—We have been informed, by a gentleman who has had practical proof of its success, of a new mode of keeping fruits fresh for the table, as grapes, plums, &c. a long time after they have been gathered. It is simply to alternate them in layers with cotton batting, in clean stone jars, and to place them in a chamber secure from frost. The discovery was accidental. A servant maid in the family of William Morey, of Union Village, Washington county, about to visit her friends, secured a quantity of plums in this way, to preserve them till her return. They were found to have kept in excellent condition, long after this fruit had disappeared in the garden. From the hint thus afforded, Mr. Morey, Mr. Holmes, and one or two neighbours, laid down grapes in this manner last fall, and they enjoyed the luxury of fresh, fine flavoured fruit through the winter, until the early part of March.—*Cultivator*

***Beet Root Sugar.***—A remarkable proof of the facility with which beet-root sugar manufactories may be established, is presented at this moment at Wallers in the department du Nord.—Four of the villages, by advancing 50 fr. each, have

formed a joint capital of 200 fr., and with this they produce between 40 and 50 lbs. of sugar, of rather inferior quality, a day. They employ currycombs to rasp the beet roots, which they put into a napkin press to extract the juice, and then boil the syrup in common culinary boilers.

We learn from Berlin that the manufacture of sugar from beet-root has become quite a mania in Prussia, and that the land-owners have given up the cultivation of potatoes for distillation, and planted all their fields with the new saccharine root.—*English paper.*

—

*Planting Evergreens.*—In planting evergreens in winter, a dull, calm day answers very well, but in autumn or spring, a moist rainy day is the best. Whether planting be done in a dull day, a wet day, or a dry day, it is very necessary to keep in view the expediency of keeping the plants for as short a time out of the ground as possible; if only a few minutes so much the better; and in all cases when it can be done, where great numbers are to be planted, we should, if possible, have some men stationed to take up the plants, others to carry them, and a third set to put them into the ground. In all seasons, situations and soils, the plants should be well soaked with water, as soon as the earth is put about the roots.—*M'Nab on Planting Evergreens.*

—

*Effects of Heat and Moisture on Plants.*—In the economy of bulbs and tubers, nature teaches a state of repose, and a preservation of vital energies as most conducive to future vigorous development, experienced in the culture of the tulip, the hyacinth, and many others. In the whole of vegetation, the important agencies of heat and moisture are well known; the former working chiefly by expanding, the latter floats the nutritious matter into the minutest ramifications. Thus, the end of a creeping rose-shoot introduced into a hot-house, will grow several inches, while not a bud moves on the plant outside. In its own more fervid climate, *Yucca gloriosa* displays its honours from the elevation of a stem: while in the open air in this country, the stem remains latent in a bulb. Thus, their conjoined agencies may be traced in the revival of the fading blossoms of a nosegay, by the addition of a little hot water to that already in the glass.—*Rep. of Drummond's Ag. Museum*, 1834.

—

*Paints for Preserving Wood.*—The following is the mode of making a composition for preserving wood work, given in Young's Calendar, who says, "it will preserve planks and boards for ages." It is easily made and applied, and its efficacy tested.

Melt twelve ounces of rosin in an iron pot, add three gallons of train oil, and three or four rolls of brimstone; when melted thin, add as much Spanish brown, or brown ochre, first ground fine, with as much oil as will give the required colour; lay it on with a brush as hot and thin as possible; and some days after the first coat is dry, lay on another.---*Genesse Farmer.*

—

*Euphobia Phosphorescens.*—This remarkable shrub, which grows on the rivers in Brazil in South America, is said to possess the singular property of spontaneous combustion. A very interesting paper on the subject was lately read before the London Linnæan Society, by Mr. Mornay, who has witnessed its ignition. He says, "when this Euphobia forms large, entangled, impenetrable masses, covering perhaps a quarter of an acre of ground, and growing some twenty feet high, it will take fire spontaneously, emitting, for some time, a vast column of dense black smoke, and at last bursting out into flames. Whenever the author had an opportunity of observing the combustion of the juice of this plant, on its coming in contact with atmospheric air, the temperature was a very little raised: the combustion (with flame) went on at a low temperature, until stopped by the formation of a crust, which quickly takes place. The temperature always appears to be too low to spread into a conflagration.—*Silk Culturist.*

—

*Fruit trees.*—If, in looking over your orchard, you perceive any limbs overburthened with fruit, you will do well to pick off a part, or put props under the limbs, or perhaps do both. In most cases when time can be spared it will be advisable to pick off the supernumerary apples, peaches, &c. "No error," says Mr. Coxe, "is more universal than an anxiety for early productiveness in an orchard. It is generally obtained at the expense of much eventual profit, and of a great diminution of the size and vigour of the trees. Believing early fecundity to be injurious to the vigour and perfection of plants, I am always attentive to pluck from the trees these evidences of early maturity in the first stages of their existence."—*Horticultural Register.*

At an Extra Meeting of St. Andrew's Agricultural and Police Society convened on 17th inst., Mr. John Rivers, in a feeling and impressive address, announced the death of the late Mr. JOHN CALDER MIKELL., and moved that a Committee of three be appointed, to express the feelings of this Society on the melancholy occasion: When Messrs. John Rivers, John B. Girardeau and Joseph B. Hinson, were appointed; and on motion of John Rivers, Esq., Dr. Thomas Legare, the President, was added as Chairman of the Committee.

The Committee after retiring, returned, and through their Chairman, reported the following Preamble and Resolutions, which were unanimously adoptod:

PREAMBLE.

A grave and solemn occasion has called us together. Death that has been busy on our borders, has at last entered our immediate circle. But a short time back we met in all the cheerfulness of health, and with the well founded hope of a long continued life. But alas! how few and short are the days of man.

We are now convened for the purpose of paying the last tribute of respect to the memory of our deceased friend and fellow member, Mr. JOHN CALDER MIKELL, whose character (when alive) we highly appreciated, and whose loss we now sincerely mourn. Eulogy is lost upon the dead; but it is inspiring to the living, saying to the young and rising generation, "go and do ye likewise."

Our friend was born of the most respectable parents, but was doomed in early life, to contend with adversities of fortune; and it is in the triumphant manner in which he passed through those trying scenes, treasuring up to himself a comfortable independence, and (what is of inestimable higher value) an unimpeachable reputation, that we would hold up his life, as an example to the coming generation.

Of modest and unassuming habits, his virtues shone brightest in the private circle, as a husband, as a parent, as a friend, as a gentleman, as the Christian: and our Island will gratefully acknowledge itself much indebted to his example for the Agricultural industry and enterprize, which so honorably characterize its inhabitants.

The high respect in which he was held on Edisto Island, the community of his birth and early manhood, is the surest guarantee to us his adopted neighbors, that we have not placed too great an estimate upon the value of his character; and the urbanity of his manners, and the warm charities of his nature, will cause his memory to be long cherished in the hearts of his more immediate associates.

*Resolved therefore*, That in the death of Mr. JOHN CALDER MIKELL, our Society has lost one of its most respected and experienced members.

*Resolved*, That while we are disposed to submit without murmuring to this afflictive dispensation of Providence, we are still deeply and mournfully impressed with the irreparable breach, made in the social relations of our little community.

*Resolved*, That we sincerely sympathise with his afflicted widow and family, in their very sudden and overwhelming bereavement.

*Resolved*, That as a tribute of respect to the memory of the deceased, the members of this Society wear crape for thirty days.

*Resolved*, That a copy of these Resolutions be transmitted to the family of the deceased.

On motion,

*Resolved*, That the foregoing Preamble and Resolutions be published in the Southern Agriculturist and daily papers of Charleston.

Extract from the Minutes,

ROBERT LEBBY, Secretary

Johnsonville, 19th October, 1836.

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